Application Programming Interface Specifications

Integrated e-filing and CPC 2.0 Project

API Name	e-Verify Return
API Description	API used to e-Verify filed returns using Electronic Verification Code (EVC) or Aadhaar OTP.

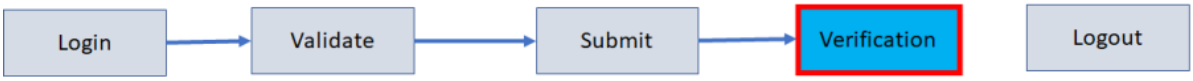
Version History

Version	Date	Description
1.0	29-10-2021	Initial Draft
1.1	17-11-2021	Exception scenarios added

Table of Contents

1. Overview

As noted in the ERI Specification Overview document the interaction during the submission phase includes 3 key steps in addition to the Login and Logout.



This document describes the APIs available to e-verify filed returns using Electronic Verification Code (EVC) or Aadhaar OTP.

- EVC can be generated by the user using Aadhaar OTP, Bank Account, Demat account.
- If taxpayer selects the option to verify return later, he/she can verify return electronically using e-verify return functionality or by sending ITR-V to CPC by post.
- If return is filed by ERI than unregistered/registered taxpayer can verify return electronically using e-verify return functionality at Home page or by sending ITR-V to CPC by post.

2. About API

Requester	ERI type 2 or ERI type 3
Provider	eVerifyApi
Description	Collection of APIs to enable ERI type-2 and Type-3 to e-Verify IT returns
Mode of Integration (Real time / Batch)	Real Time
Processing Details	It will give a platform to verify return electronically using e-verify return functionality or by sending ITR-V to CPC by post
Pre-Processing Details	Caller must have a validated return with ARN Number Taxpayer should have submitted the ITR through this ERI
Service Name	updateVerMode generateEVC verifyEVC
API URL	TBD

3. Target Audience and Pre-requisites

This is technical document and target audiences are ERIs working in their application and interested to integrate their application with IEC 2.0 platform.
The pre-requisites to call this API is that ERI is already registered with IEC 2.0 platform. They have valid credentials to call the API.

4. EriUpdateVerMode API Details

This service is used to update the ITR verification mode of the taxpayer, where taxpayer has already submitted the ITR.

4.1 API Usage Scenario

Taxpayer update verification mode for their ITR once it is submitted using submitITR API. When ERI application submits the call this API below are the activities are performed:

1. Taxpayer can choose option to verify the ITR "LATER" where he/she can verify their return later using any one of the modes which are available in eFiling portal or through ERI.
2. Taxpayer can also choose the option to verify the ITR "ITRV" where he/she can send ITR-V through offline mode by post.

4.2 API Request process

ERI application must have already establish the login session and auth token with eFiling system using the login API. Application will initiate call with API as below:

1. ERI application will capture the taxpayer's choice for verification mode as per request parameters are defined.
2. ERI Application will call EriUpdateVerMode API and send the request.
3. eFiling system will update the verification mode provided by the ERI application.

4.3 API Protocol

EriUpdateVerMode API is exposed as REST API over the HTTPS. The input data should be sent as JSON document using Content-Type "application/json".

4.4 Request Parameters

The request will consist of request header and request body:

4.4.1 Request Header:

Header is mandatory and will consists of following values:
Mandatory Request Header Parameters:

Header Name	Header Value
Content-type	application/json
clientId	clientId value which is provided to ERI as part of the registration
clientSecret	clientSecret value which is provided to ERI as part of the registration
authToken	Auth token from the Login Flow
accessMode	"API"

4.4.2 Request Body:

Request body will consist of below attributes:

1. **data:** data attribute will be Base64 encoded string of API request json. Details of request json attributes are explained in request data element details.
2. **eriUserId:** It is mandatory and valid value is user ID of the ERI
3. **sign:**

- The API request data attribute should be digitally signed for the message integrity and non-repudiation purposes.
- Digital signing should always be performed by the ERI from value of data attribute which was generated from request json.
- The signature should be generated using a valid X.509 certificate
- signature value should be generated from data field using ERI's DSC private key.
- ERI should share their DSC public key with ITD to validate the signature.

4.4.3 Details of data attribute:

Below are the request parameters, which is request json used to create data attribute as explained above data attribute of the request body:

Name of the Parameter	Data type	Max length	Is Mandatory	Description

serviceName	String	60	Yes	It is mandatory and valid value is **"EriUpdateVerMode"**
Pan	String	10	Yes	Valid PAN of the taxpayer.
verMode	String	10	Yes	Valid values are: **"LATER"** for later **"ITRV"** for ITR-V
ackNum	String	15	Yes	Acknowledgement number of the ITR
Ay	String	4	Yes	Assessment year value format it **"YYYY"**
formCode	String	1	Yes	Form code "1" for ITR 1 "2" for ITR 2 "3" for ITR 3 "4" for ITR 4 "5" for ITR 5 "6" for ITR 6 "7" for ITR 7

4.5 Response Parameters

Name of the Parameter	**Data type**	**Max length**	**Is Mandatory**	**Description**
Messages	List<String>		Yes	List of information messages. There can be one or more messages. The messages array will be null if there are no messages.
Errors	List<Error>		No	This is a not mandatory field. List of errors. The value will be null if there is no error.
successFlag	Boolean		Yes	Indicates whether EriUpdateVerMode call is successful. Possible value is true or false. **"successFlag": true**
httpStatus	String	20	No	http codes corresponding to response. Possible value is "OK"

4.6 UpdateVerMode API - Sample Request format

{
"data": "",
"sign": "",
"eriUserId": ""
}

data tag will be Base64Encoded string from following request json

{
"serviceName": "",
"pan": "",
"verMode": "",
"ackNum": "",
"ay": "",
"formCode”:""
}

4.7 UpdateVerMode API - Sample Response format

{
"messages": [],
"errors": [],
"successFlag": true,
"transactionId": "1324t56",
"httpStatus": "OK"
}

5. GenerateEvc API Details

This API is used to generate EVC online using one of the verifications online.

5.1 API Usage Scenario

Taxpayer can verify their ITR once it is submitted using submitITR API.
When ERI application submits the call this API below are the activities are performed:

1. Taxpayer can choose option to verify the ITR through Aadhaar OTP where PAN is linked to Aadhaar and Aadhaar has valid mobile number.

2. Taxpayer can also choose option to verify the ITR through Bank EVC where bank account is linked to PAN and EVC is enabled.
3. Taxpayer can also choose option to verify the ITR through DEMAT EVC where DEMAT is linked to PAN and EVC is enabled.

5.2 API Request process

ERI application must have already establish the login session and auth token with eFiling system using the login API. Application will initiate call with API as below:

1. ERI application will capture the taxpayer's choice for verification mode as per request parameters are defined.
2. ERI Application will call GenerateEvc API and send the request.
3. eFiling system will send the OTP or EVC depending on the verification mode is chosen by the taxpayer.

5.3 API Protocol

GenerateEvc API is exposed as REST API over the HTTPS. The input data should be sent as JSON document using Content-Type "application/json".

5.4 Request Parameters

The request will consist of request header and request body:

5.4.1 Request Header:

Header is mandatory and will consists of following values:
Mandatory Request Header Parameters:

Header Name	Header Value
Content-type	application/json
clientId	clientId value which is provided to ERI as part of the registration
clientSecret	clientSecret value which is provided to ERI as part of the registration
authToken	Auth token from the Login Flow
accessMode	"API"

5.4.2 Request Body:

Request body will consist of below attributes:

1. **data:** data attribute will be Base64 encoded string of API request json. Details of request json attributes are explained in request data element details.
2. **eriUserId:** It is mandatory and valid value is user ID of the ERI
3. **sign:**

- The API request data attribute should be digitally signed for the message integrity and non-repudiation purposes.
- Digital signing should always be performed by the ERI from value of data attribute which was generated from request json.
- The signature should be generated using a valid X.509 certificate
- signature value should be generated from data field using ERI's DSC private key.
- ERI should share their DSC public key with ITD to validate the signature.

5.4.3 Details of data attribute:

Below are the request parameters, which is request json used to create data attribute as explained above data attribute of the request body:

Name of the Parameter	Data type	Max length	Is Mandatory	Description
serviceName	String	60	Yes	It is mandatory and valid value is **"EriGenerateEvcService"**
pan	String	10	Yes	Valid PAN of the taxpayer
verMode	String	10	Yes	Verification mode. Valid values are: "**AADHAAR**" for Aadhaar OTP "**BANKEVC**" for EVC through bank account "**DEMATEVC**" for EVC through DEMAT account
ackNum	String	15	Yes	Acknowledgement number
ay	String	4	Yes	Assessment year valid format is **"YYYY"**
formCode	String	1	Yes	Form code "1" for ITR 1 "2" for ITR 2 "3" for ITR 3 "4" for ITR 4 "5" for ITR 5 "6" for ITR 6 "7" for ITR 7

5.5 Response Parameters

Name of the Parameter	Data type	Max length	Is Mandatory	Description
messages	List<String>		Yes	List of information messages. There can be one or more messages. The messages array will be null if there are no messages.
errors	List<Error>		No	This is not a mandatory field. List of errors. The value will be null if there is no error.
successFlag	Boolean		Yes	Indicates whether generateEVC call is successful. Possible value is true or false. **"successFlag": true**
entity	String		No	This field is only for positive response.
transactionId	String		No	This field is only for positive response. Transaction ID received from UIDAI or eFiling system at the time of OTP generation Mandatory for Aadhaar OTP Validation but not required for Bank or Demat EVC verification
autkn	String	15	No	This field is only for positive response.
httpStatus	String	20	No	This is a not mandatory field. http codes corresponding to response. Possible value is "OK"

5.6 GenerateEvc API - Sample Request format

{
"data": "",
"sign": "",
"eriUserId": ""
}

data tag will be Base64Encoded string from following request json

{
"serviceName": "",
"eriUserId": "",
"pan": "",
"verMode": "",
"ackNum": "",
"ay": "",
"formCode":""
}

5.7 GenerateEvc API - Sample Response format

{
"messages": [],
"errors": [],
"successFlag": true,
"transactionId": "1324t56",
"httpStatus": "OK"
}

6. VerifyEvc API Details

This API is used to verify the ITR using Aadhaar OTP or EVC

6.1 API Usage Scenario

ERI can submit their choice for verification mode for their client.
When ERI application submits the call this API below are the activities are performed:

1. Taxpayer already has the OTP or EVC based on the generateEVC API called was made earlier.
2. Taxpayer will provide the OTP or EVC to verify the return.

6.2 API Request process

ERI application must have already establish the login session and auth token with eFiling system using the login API. Application will initiate call with API as below:

1. ERI application will capture the OTP or EVC value from the taxpayer.
2. ERI application will call EriVerifyEvc API to verify the return for the taxpayer.

6.3 API Protocol

EriVerifyEvc API is exposed as REST API over the HTTPS. The input data should be sent as JSON document using Content-Type "application/json".

6.4 Request Parameters

The request will consist of request header and request body:

6.4.1 Request Header:

Header is mandatory and will consists of following values:
Mandatory Request Header Parameters:

Header Name	Header Value
Content-type	application/json
clientId	clientId value which is provided to ERI as part of the registration
clientSecret	clientSecret value which is provided to ERI as part of the registration
authToken	Auth token from the Login Flow
accessMode	"API"

6.4.2 Request Body:

Request body will consist of below attributes:

1. **data:** data attribute will be Base64 encoded string of API request json. Details of request json attributes are explained in request data element details.
2. **eriUserId:** It is mandatory and valid value is user ID of the ERI
3. **sign:**

- The API request data attribute should be digitally signed for the message integrity and non-repudiation purposes.
- Digital signing should always be performed by the ERI from value of data attribute which was generated from request json.
- The signature should be generated using a valid X.509 certificate
- signature value should be generated from data field using ERI's DSC private key.
- ERI should share their DSC public key with ITD to validate the signature.

6.4.3 Details of data attribute:

Below are the request parameters, which is request json used to create data attribute as explained above data attribute of the request body:

Name of the Parameter	Data type	Max length	Is Mandatory	Description
serviceName	String	60	Yes	It is mandatory and valid value is **"EriVerifyEvcService"**
pan	String	10	Yes	Valid PAN of the taxpayer who is being added as client by the ERI
ay	String	4	Yes	Assessment year. Valid format is **"YYYY"**
formCode	String	1	Yes	Form code "1" for ITR 1 "2" for ITR 2 "3" for ITR 3 "4" for ITR 4 "5" for ITR 5 "6" for ITR 6 "7" for ITR 7
ackNum	String	15	Yes	Acknowledgement number generated at the time of ITR submission
transactionId	String		Yes	Transaction ID received from UIDAI or eFiling system at the time of OTP generation
verMode	String		Yes	Verification mode. Valid values are: "**AADHAAR**" for Aadhaar OTP "**BANKEVC**" for EVC through bank account "**DEMATEVC**" for EVC through DMAT account
otpValue	String	6	Yes	It is mandatory only in case verMode is "AADHAAR". Aadhaar OTP value will be 6-digit number.
evcValue	String	10	Yes	It is mandatory only in case verMode is "BANKEVC" or "DEMATEVC". Value will be 10-alphanumeric.

6.5 Response Parameters

Name of the Parameter	Data type	Max length	Is Mandatory	Description
messages	List<String>		Yes	List of information messages. There can be one or more messages. The messages array will be null if there are no messages. **"messages": []**
errors	List<Error>		No	This is not a mandatory field. List of errors. The value will be null if there is no error. **"errors": []**
successFlag	Boolean		Yes	Indicates whether EriVerifyEvc call is successful. Possible value is true or false. **"successFlag": true**
httpStatus	String	20	No	http codes corresponding to response. Possible value is "OK"

6.6 VerifyEvc API - Sample Request format

{
"data": "",
"sign": "",
"eriUserId": ""
}
data tag will be Base64Encoded string from following request json
{
"serviceName": "",
"eriUserId": "",
"pan": "",
"verMode": "",
"ay": "",
"formCode:"",
"ackNum": "",
"transactionId": "",
"otpValue": "",
"evcValue ": ""
}

6.7 VerifyEvc API - Sample Response format


```
{
"messages": [],
"errors": [],
"successFlag": true,
"transactionId": "132456",
"httpStatus": "OK"
}
```


7. API Exception Details

Scenario	Error code	Details	Error String	Message Type
Invalid Json data	*EF40000*	When json is invalid	JSON data invalid.	ERROR
Pan has no record in DB	*EF00009*	When entered pan has no record in DB	No record found for the entered PAN.	ERROR
When transactionId associated with Aadhaar OTP is not same	*EF00224*	When transactionId associated with Aadhaar OTP is not same	"txn" value did not match with "txn" value of Request OTP API.	ERROR
OTP validation failed	*EF40012*	When user enters incorrect OTP	OTP validation failed.	ERROR
OTP generation Failed	*EF40014*	When user generation fails	OTP Generation failed.	ERROR
When Acknowledgement number does not have any record	*EF00156*	When entered Acknowledgement number does not have record in DB	No records found for this Acknowledgement number, Please Retry	ERROR
When expected values are not provided for e.g., absence of ackNum while validation	*EF00001*	When expected values are not provided for e.g., absence of ackNum while validation	Please enter valid values.	ERROR

When individual pan selects EVC through bank account and account is not EVC enabled	*EF00101*	When individual pan selects EVC through bank account and account is not EVC enabled	To generate EVC, you need to validate and enable EVC on your bank account.	ERROR
When other than individual pan tries to generate EVC through bank, but account is not EVC enabled and validated	*EF00102*	When other than individual pan tries to generate EVC through bank, but account is not EVC enabled and validated	Please inform your Principal Contact to validate his bank account and enable EVC by logging in to e-filing portal using his credentials.	ERROR
When individual pan selects EVC through demat account and account is not EVC enabled	*EF00104*	When individual pan selects EVC through demat account and account is not EVC enabled	To generate EVC, you need to validate and enable EVC on your demat account.	ERROR
When other than individual pan tries to generate EVC through demat account, but account is not EVC enabled and validated	*EF00105*	When other than individual pan tries to generate EVC through demat account, but account is not EVC enabled and validated	Please inform your Principal Contact to validate his Demat account and enable EVC on it by logging in to e-filing portal using his credentials.	ERROR
When otp is expired while hitting e-verification services	*EF00128*	When otp is expired while hitting e-verification services	OTP has expired, please generate new OTP.	ERROR
When user enters invalid otp while hitting e-verification services	*EF00028*	When user enters invalid otp while hitting e-verification services	Invalid OTP. Please retry.	ERROR
When entered EVC is invalid	*EF00108*	When entered EVC is invalid	Invalid EVC. Please retry.	ERROR
When user wants to generate Aadhaar OTP but Aadhaar is not linked with PAN (for registered user)	*EF00099*	When user wants to generate Aadhaar OTP but Aadhaar is not linked with PAN (for registered user)	Your PAN and Aadhaar is not linked.	ERROR

When other than individual register pan does not have linking between Aadhaar and PAN	EF00100	When other than individual register pan does not have linking between Aadhaar and PAN	Please inform your Principal Contact to complete Aadhaar PAN linking process by logging in to e-filing portal using his credentials	ERROR
When error code received from UIDAI is 953	*EF00226*	When error code received from UIDAI Is 953 (this error will come from UIDAI side)	Aadhaar OTP is already generated. Please use the same for verification or try to generate new OTP after half an hour.	ERROR
When PAN is not in a valid format	*EF00011*	Please enter a valid PAN Number.	When PAN is not in a valid format	ERROR
When Pan Entered does not exist.	*EF00047*	The PAN does not exist.	When Pan Entered does not exist.	ERROR
When the user is inactive.	*EF00098*	The PAN entered is inactive. Please contact your Accessing Officer to activate the PAN.	The PAN entered is inactive. Please contact your Accessing Officer to activate the PAN.	ERROR
When no record found for PAN.	*EF00009*	No record found for the entered PAN.	No record found for the entered PAN.	INFO
When provided incorrect input for PAN, AY and Form Name	*EF500054*	No Details found as per acknowledgement number	Details are not as per Acknowledgement number. Please provide correct input for PAN, AY and Form Name	ERROR
When incorrect verification mode provided	*EF500055*	Bank EVC and Demat EVC will not be verified as incorrect verification mode provided	Please provide correct verification mode for which EVC is generated	ERROR
When EVC has expired	*EF00107*	EVC will not be verified as EVC has expired	EVC has expired. Please generate new EVC.	ERROR

When Aadhaar is not linked with PAN	*EF00232*	Aadhaar OTP will not be verified as Aadhaar is not linked with PAN	Please link your Aadhaar to your PAN to verify return using Aadhaar OTP.	ERROR
When ERI user who created the ITR is not the one who is accessing now	*EF500051*	E-verify cannot be done for this ITR as it is not submitted through this ERI.	This ITR cannot be e-verified as it is not submitted through this ERI.	ERROR
When ITR is already Verified	*EF40055*	ITR is already verified.	Your ITR is already E-Verified.	REMARK
When ERI client linkage fails	*EF500058*	When the PAN is not a valid client of logged in ERI user	The PAN is not a valid client for this ERI.	ERROR
When attributes are incorrect in json request data	*EF20123*	When request data is invalid	Invalid Request Data	ERROR
When a user request EVC for 6th time for same service within 72 hours	*EF500093*	When limit to receive EVC is over	You have exceeded the limit to receive EVC. Please try again after some time.	ERROR
When user enters incorrect EVC for 4th time	*EF500094*	When number of attempts to enter correct EVC is over	You have exceeded the number of attempts to enter correct EVC. Please generate new EVC.	ERROR